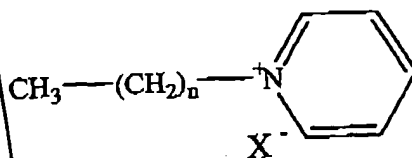
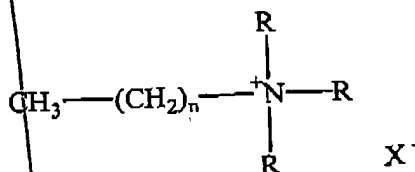


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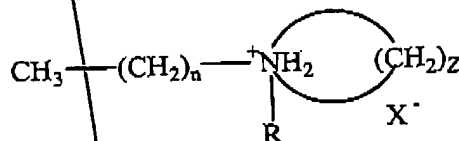
wherein n is 9-21; and X is a halide,

wherein said tetra-alkylammonium salt is represented by the structural formula (II):



wherein n is 9-21; R is selected from the group consisting of  $\text{CH}_3$  and  $\text{C}_2\text{H}_5$ ; and X is a halide, and

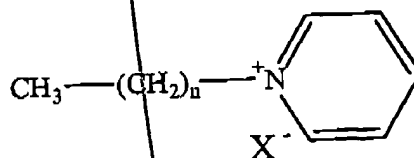
wherein said alkylalicyclic ammonium salt is represented by the structural formula (III):



wherein n is 9-21; Z is 4-5; R is selected from the group consisting of  $\text{CH}_3$  and  $\text{C}_2\text{H}_5$ ; and X is a halide.

55. A concentrated quaternary ammonium compound solution comprising:  
a quaternary ammonium compound with a concentration from greater than 10% by weight; and  
at least one solubility enhancing agent, wherein at least one of said solubility enhancing agents is propylene glycol,  
wherein said quaternary ammonium compound is an alkylpyridinium salt or an alkylalicyclic ammonium salt.

56. The concentrated quaternary ammonium compound solution of claim 55, wherein said alkylpyridinium salt is represented by the structural formula (I):

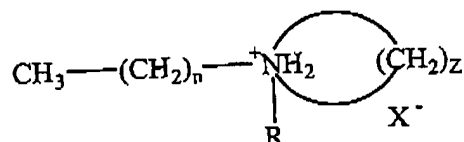


wherein n is 9-21; and X is a halide, and

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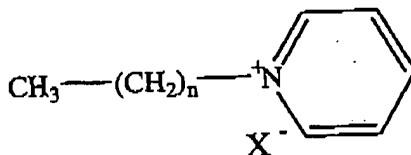
wherein said alkylalicyclic ammonium salt is represented by the structural formula

(III):



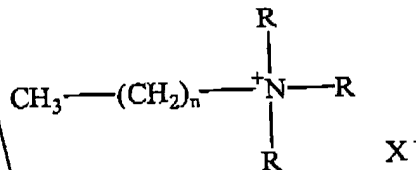
wherein n is 9-21; Z is 4-5; R is selected from the group consisting of CH<sub>3</sub> and C<sub>2</sub>H<sub>5</sub>; and X is a halide.

57. A concentrated quaternary ammonium compound solution comprising:  
a quaternary ammonium compound with a concentration from greater than 10% by weight; and  
at least one solubility enhancing agent, wherein at least one of said solubility enhancing agents is propylene glycol, wherein said quaternary ammonium compound is an alkylpyridinium salt represented by the structural formula (I):



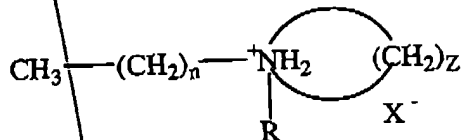
wherein n is 9-21; and X is a halide,

a tetra-alkylammonium salt represented by the structural formula (II)



wherein n is 9-21; R is selected from the group consisting of CH<sub>3</sub> and C<sub>2</sub>H<sub>5</sub>; and X is a halide, or

an alkylalicyclic ammonium salt represented by the structural formula (III):



wherein n is 9-21; Z is 4-5; R is selected from the group consisting of CH<sub>3</sub> and C<sub>2</sub>H<sub>5</sub>; and X is a halide.

58. The concentrated quaternary ammonium compound solution of claim 57, wherein said quaternary ammonium compound is greater than about 15% by weight.

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59. The concentrated quaternary ammonium compound solution of claim 52, wherein said solution does not comprise one or more flavoring oils.

60. The concentrated quaternary ammonium compound solution of claim 55, wherein said solution does not comprise one or more flavoring oils.

61. The concentrated quaternary ammonium compound solution of claim 57, wherein said solution does not comprise one or more flavoring oils.

62. The solution of claim 52, wherein said solubility enhancing agent further comprises an alcohol or a polyglycol.

63. The solution of claim 62, wherein said solubility enhancing agent is selected from the group consisting of a monohydric alcohol, a dihydric alcohol, a trihydric alcohol, a polyethylene glycol and a combination thereof.

64. The solution of claim 63, wherein said monohydric alcohol is an aliphatic alcohol, said dihydric alcohol is a glycol or a derivative thereof, and said trihydric alcohol is glycerol or a derivative thereof.

65. The solution of claim 55, wherein said quaternary ammonium compound ranges from greater than about 10% by weight to about 60% by weight.

66. The solution of claim 57, wherein said quaternary ammonium compound ranges from greater than about 10% by weight to about 60% by weight.

67. The solution of claim 55, wherein said quaternary ammonium compound ranges from greater than about 10% by weight to about 50% by weight.

68. The solution of claim 57, wherein said quaternary ammonium compound ranges from greater than about 10% by weight to about 50% by weight.

69. The solution of claims 55, wherein said quaternary ammonium compound ranges from greater than about 10% by weight to about 40% by weight.

70. The solution of claims 57, wherein said quaternary ammonium compound ranges from greater than about 10% by weight to about 40% by weight.

71. The solution of claim 55, wherein said quaternary ammonium compound ranges from greater than about 10% weight to about 30% weight.

72. The solution of claim 57, wherein said quaternary ammonium compound ranges from greater than about 10% weight to about 30% weight.

73. The solution of claim 58, wherein said quaternary ammonium compound ranges from greater than about 15% by weight to about 50% by weight.

74. The solution of claim 59, wherein said quaternary ammonium compound ranges from greater than about 15% by weight to about 50% by weight.

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75. The solution of claim 58, wherein said quaternary ammonium compound ranges from greater than about 15% by weight to about 40% by weight.
76. The solution of claim 59, wherein said quaternary ammonium compound ranges from greater than about 15% by weight to about 40% by weight.
77. The solution of claim 52, wherein said quaternary ammonium compound ranges from about 15% weight to about 25% by weight.
78. The solution of claim 58, wherein said quaternary ammonium compound ranges from about 15% weight to about 25% by weight.
79. The solution of claim 59, wherein said quaternary ammonium compound ranges from about 15% weight to about 25% by weight.
80. The solution of claim 52, wherein said solubility enhancing agent is present at a concentration of up to about 70% by weight.
81. The solution of claim 52, wherein said solubility enhancing agent is present at a concentration ranging from about 10% by weight to about 60% by weight.
82. A concentrated quaternary ammonium compound solution comprising:  
a quaternary ammonium compound with a concentration of about 40% by weight; and  
propylene glycol with a concentration ranging from about 50% by weight to about 60% by weight.
83. The solution of claim 82, wherein said quaternary ammonium compound is present at a concentration of about 40% by weight and said propylene glycol is present at a concentration ranging from about 55% by weight to about 60% by weight, and wherein said solution further comprises water up to about 5% by weight.
84. The solution of claim 83, wherein said quaternary ammonium compound is present at a concentration of about 40% by weight, said propylene glycol is present at a concentration of about 57% by weight and said water is present at about 3% by weight.
85. The solution of claim 82, wherein said quaternary ammonium compound is cetylpyridinium chloride.
86. The solution of claim 52, wherein said quaternary ammonium compound is present at a concentration of about 40% by weight and said solubility enhancing agent is present at a concentration of about 50% by weight.
87. The solution of claim 52, wherein said quaternary ammonium compound is present at a concentration of about 20% by weight and said solubility enhancing agent is present at a concentration of about 50% by weight.

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78. The solution of claim 52, wherein said solubility enhancing agent is a combination of ethyl alcohol and propylene glycol.

89. The solution of claim 62, wherein said quaternary ammonium compound is present at a concentration of about 40% by weight and said alcohol is glycerol and is present at a concentration of up to about 20% by weight.

90. The solution of claim 53, wherein said alkylpyridinium salt is cetylpyridinium chloride.

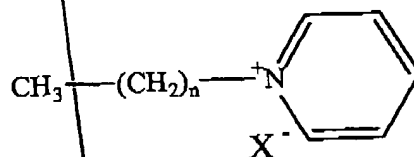
91. A concentrated quaternary ammonium compound solution comprising:  
a quaternary ammonium compound with a concentration from greater than about 10% by weight; and

at least one solubility enhancing agent, wherein at least one of said solubility enhancing agents is propylene glycol,

wherein said quaternary ammonium compound is an alkylpyridinium salt or an alkylalicyclic ammonium salt, and

wherein said solution does not comprise one or more flavoring oils.

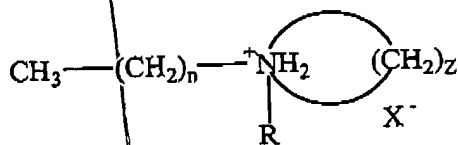
92. The concentrated quaternary ammonium compound solution of claim 91, wherein said alkylpyridinium salt is represented by the structural formula (I):



wherein n is 9-21; and X is a halide, and

wherein said alkylalicyclic ammonium salt is represented by the structural formula

(III):



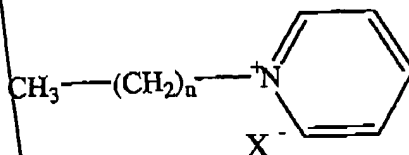
wherein n is 9-21; Z is 4-5; R is selected from the group consisting of CH<sub>3</sub> and C<sub>2</sub>H<sub>5</sub>; and X is a halide.

93. A concentrated quaternary ammonium compound solution comprising:  
a quaternary ammonium compound with a concentration from greater than about 10% by weight; and

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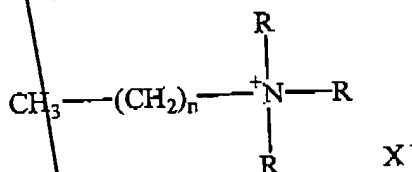
at least one solubility enhancing agent, wherein at least one of said solubility enhancing agents is propylene glycol,

wherein said quaternary ammonium compound is an alkylpyridinium salt represented by the structural formula (I):



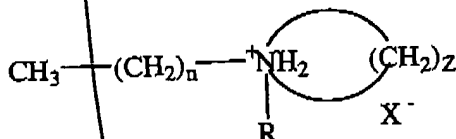
wherein n is 9-21; and X is a halide,

a tetra-alkylammonium salt represented by the structural formula (II)



wherein n is 9-21; R is selected from the group consisting of CH<sub>3</sub> and C<sub>2</sub>H<sub>5</sub>; and X is a halide, or

an alkylalicyclic ammonium salt represented by the structural formula (III):



wherein n is 9-21; Z is 4-5; R is selected from the group consisting of CH<sub>3</sub> and C<sub>2</sub>H<sub>5</sub>; and X is a halide, and

wherein said solution does not comprise one or more flavoring oils.

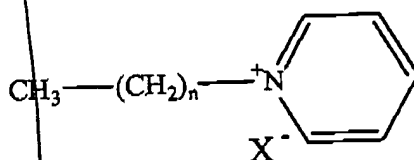
94. A quaternary ammonium compound solution comprising:  
a quaternary ammonium compound with a concentration of up to about 1% by weight;

at least one solubility enhancing agent, wherein at least one of said solubility enhancing agents is propylene glycol; and water,

wherein said quaternary ammonium compound is an alkylpyridinium salt or an alkylalicyclic ammonium salt, and wherein said solution does not comprise one or more flavoring oils.

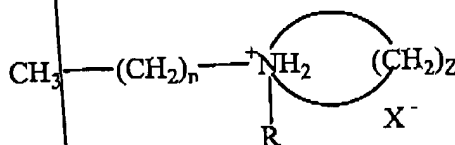
95. The concentrated quaternary ammonium compound solution of claim 94, wherein said alkylpyridinium salt is represented by the structural formula (I):

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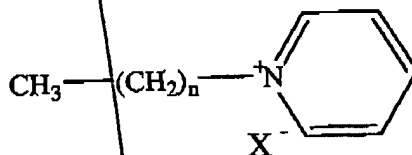
wherein n is 9-21; and X is a halide, and  
 wherein said alkylalicyclic ammonium salt is represented by the structural formula

(III):

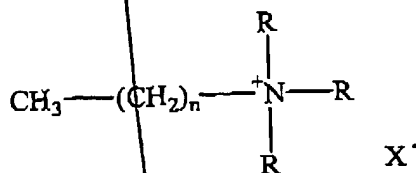


wherein n is 9-21; Z is 4-5; R is selected from the group consisting of  $\text{CH}_3$  and  $\text{C}_2\text{H}_5$ ;  
 and X is a halide.

96. A concentrated quaternary ammonium compound solution comprising:  
 a quaternary ammonium compound with a concentration from greater than  
 about 10% by weight; and  
 at least one solubility enhancing agent, wherein at least one of said solubility  
 enhancing agents is propylene glycol,  
 wherein said quaternary ammonium compound is an alkylpyridinium salt  
 represented by the structural formula (I):

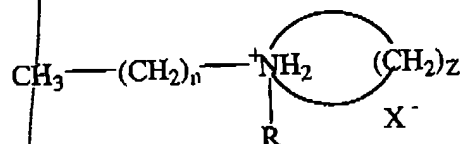


wherein n is 9-21; and X is a halide,  
 a tetra-alkylammonium salt represented by the structural formula (II)



wherein n is 9-21; R is selected from the group consisting of  $\text{CH}_3$  and  $\text{C}_2\text{H}_5$ ; and X is  
 a halide, or  
 an alkylalicyclic ammonium salt represented by the structural formula (III):

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wherein n is 9-21; Z is 4-5; R is selected from the group consisting of CH<sub>3</sub> and C<sub>2</sub>H<sub>5</sub>; and X is a halide, and wherein said solution does not comprise one or more flavoring oils.

97. The solution of claim 94, wherein said quaternary ammonium compound has a concentration of about 0.01% to about 1%.

98. The solution of claim 94, wherein said solubility enhancing agent further comprises an alcohol or a polyglycol.

99. The solution of claim 94, wherein said solubility enhancing agent is selected from the group consisting of a monohydric alcohol, a dihydric alcohol, a trihydric alcohol, a polyethylene glycol, and a combination thereof.

100. The solution of claim 97, wherein said monohydric alcohol is an aliphatic ethanol, said dihydric alcohol is a glycol or a derivative thereof, and said trihydric alcohol is glycerol or a derivative thereof.

101. The solution of claim 94, wherein said solution is in sprayable or mistable form.

102. A quaternary ammonium compound solution consisting essentially of: a quaternary ammonium compound with a concentration of up to about 1% by weight;

at least one solubility enhancing agent, wherein at least one of said solubility enhancing agents is propylene glycol; and water.

103. The solution of claim 102, wherein said quaternary ammonium compound has a concentration of about 0.01% to about 1%.

104. The solution of claim 102, wherein said solubility enhancing agent further comprises an alcohol or a polyglycol.

105. The solution of claim 102, wherein said solubility enhancing agent is selected from the group consisting of a monohydric alcohol, a dihydric alcohol, a trihydric alcohol, a polyethylene glycol, and a combination thereof.